REMARKS

Claims 41, 46, 47, 48, 52, 53, 54, 55, 56, 57, 58, 59, 60 and 65 are currently amended.

It is respectfully submitted that the present amendment presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the above amendments and the following remarks is requested. Entry of the amendment is appropriate as it places the case in better condition for appeal.

I. The Rejection of Claims 41 and 46, 47, 49-59 and 62-65 under 35 U.S.C. 112, first paragraph (enablement)

Claims 41 and 46, 47, 49-59 and 62-65 stand rejected under 35 U.S.C. 112 because the specification allegedly does not enable methods of making or enhancing the secretion of a protein of interest by cultivating cells expressing MrgA wherein the protein is expressed in cells other than *Bacillus* cells. Applicants respectfully disagree with the Examiner, however to be fully responsive Applicants have amended the claims to relate to *Bacillus* cells, admitted by the Examiner to be enabled. Claims 41, 46, 47, 48, 53-60 and 65 are currently amended to refer to *Bacillus*. Accordingly Applicants have been fully responsive to the Examiners rejection.

For the foregoing reasons, Applicants submit that the amendments herein overcome this rejection under 35 U.S.C. 112. Applicants respectfully request reconsideration and withdrawal of the rejection.

II. The Rejection of Claims 41 and 46-65 under 35 U.S.C. 102(b).

Claims 41 and 46-65 were rejected under 35 U.S.C. 102(b) as being anticipated by Chen *et al.* (Mol. Micro., 1995) (hereinafter simply referred to as "Chen"). Claims 41 and 46 require, *inter alia*, a *Bacillus* progeny cell including at least one or two or more genes encoding metallo regulated gene A (MrgA) protein with an amino acid sequence having at least 90% identity to the amino acid sequence shown in SEQ ID NO:2. Nowhere does Chen disclosure a progeny cell including one or two or more genes encoding metallo regulated gene A (MrgA) protein. Further the independent claims require that the *Bacillus* progeny cell produces greater amounts of MrgA protein with an amino acid sequence having at least 90% identity to the amino acid sequence shown in SEQ ID NO:2 than the *Bacillus* parent cell, and that the *Bacillus* progeny cell produces greater amounts of a protein of interest than the *Bacillus* parent cell. Nowhere does Chen disclose a progeny *Bacillus* cell producing greater amounts of the claimed MrgA than the parent *Bacillus* cell, and the progeny *Bacillus* cell producing greater amounts of protein of interest than the parent *Bacillus* cell. Reconsideration is urged.

In order to support the position that the claimed progeny cells are disclosed in Chen the Examiner has alleged "Chen et al transformed these cells (MA991) by inserting the heterologous genes *mrgA-lacZ* to express said MrgA and beta-galactosidase proteins, thus resulting in progeny cells (strain HB1032)." Applicants respectfully disagree and find the statement inaccurate. Conversely, Chen *et al.* clearly states on page 297:

> To test the relationship between *mrgA* and this 113 kDa protein, we transformed our *mrgA-lacZ* fusion into MA991 to generate strain HB1032. In stationary phase, HB1032 still overproduced KatA, AhpC and AhpF, but neither the 16 kDa nor the 113 kDa protein was observed by SDS-PAGE (Fig. 4). This suggests that *mrgA* is the structural gene for these two observed protein bands; the 113 kDa protein band presumably represents a stable oligomeric complex while the 16 kDa band is the appropriate size for the MrgA monomer.

In other words, the introduction of the *mrgA-lacZ* fusion into strain MA991 completely abolished production of MrgA protein in the resulting HB1032 progeny strain as evidenced by the SDS-PAGE gel in figure 4. (*See* FIG. 4).

Further, Applicants submit strain HB1032 does not include one single intact copy of the *mrgA* gene and is incapable of producing MrgA protein. For example, strain HB1032 appears to be constructed by site-specific integration of a *lacZ*-reporter into the chromosomal *mrgA* gene of MA991. *See*, *e.g.*, the figure legend of FIG. 4 where the genotype of HB1032 is shown as (MA991 *mrgA*::Tn*917-lacZ*) indicating that the genomic *mrgA* gene had been interrupted by the Tn*917-lacZ* insert. Accordingly, strain HB1032 does not include one single intact copy of the *mrgA* gene and is incapable of producing MrgA protein. Accordingly, nowhere does Chen describe a progeny *Bacillus* cell including at least one or two or more genes encoding metallo regulated gene A (MrgA) protein with an amino acid sequence having at least 90% identity to the amino acid sequence shown in SEQ ID NO:2.

Further, Chen does not show a progeny *Bacillus* cell producing greater amounts of MrgA than the parent *Bacillus* cell, and the progeny *Bacillus* cell producing greater amounts of protein of interest than the parent *Bacillus* cell. Reconsideration is urged.

For the foregoing reasons, Applicants submit that the Examiner has erred and Chen fails to anticipate or make obvious the claimed invention.

III. Claim Objections

Claims 41 and 46 are currently amended to place them in clear form. Reconsideration is urged.

IV. Conclusion

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to contact the undersigned by telephone if there are any questions concerning this amendment or application.

Respectfully submitted,

Date: October 19, 2009

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